AMENDMENTS TO THE SPECIFICATION

Please replace the paragraph on page 2 with the following amended paragraph:

On the other hand, the semiconductor device for electric power is generally assembled using various materials with different thermal expansion coefficients~~,~~. ~~so that particularly~~Particularly when a temperature of a junction between a heat spreader and a wire bonding portion or the semiconductor device for electric power increases, wire bonding gradually begins to peel off a chip due to thermal expansion stress of a coating agent of the chip or metal fatigue of a junction material begins to occur due to thermal expansion stress by a difference between the chip and the heat spreader in thermal expansion coefficients. Due to ~~repeats of the~~repeated operations and stops and repeats of the sudden changes in the load or speed, finally, the wire bonding peels completely and becomes an open state. That is, it results in failure or breakage of the semiconductor device for electric power. A cycle of thermal expansion and thermal shrinkage to the time when this wire bonding peels completely due to thermal expansion stress and results in failure or breakage is called a power cycle.

Please replace the second paragraph on page 3 with the following amended paragraph:

The object of Patent Reference 1 is to protect the semiconductor device for electric power used in an inverter apparatus etc. before resulting in the life due to the power cycle~~,~~. ~~and it~~It is constructed so that from a correlation between a power cycle and a difference between junction temperatures of the semiconductor device for electric power, a power cycle corresponding to the difference between junction temperatures of the semiconductor device for electric power in the inverter apparatus is estimated to be the life and the number of operations of the inverter apparatus is counted by a counter. ~~and when~~ When a count value exceeds a first reference value,

an alarm signal is outputted and when the count value exceeds a second reference value, a trip signal is outputted and the inverter apparatus is stopped forcedly.

Please replace the second paragraph bridging pages 4-5 with the following amended paragraph:

~~Performing~~According to this reference, alarm processing such as an alarm display command can be performed when the number of thermal stresses obtained from the number of thermal stresses of temperature change amplitude computed based on amplitude in changes in an estimated temperature of the semiconductor device for electric power and the number of thermal stresses of temperature change ratio computed based on ratio in changes in an estimated temperature of the semiconductor device for electric power exceeds the number of allowable thermal stresses. ~~and also~~Also, one can ~~obtaining~~obtain the residual life time from the number of thermal stresses and the number of allowable thermal stresses to execute a display command. ~~and also, performing alarm~~Alarm processing such as an alarm display command ~~since~~performed when operation cannot be performed by expected life time with operation of set time when the number of thermal stresses every set time obtained from the number of thermal stresses of temperature change amplitude every set time and the number of thermal stresses of temperature change ratio every set time exceeds the number of allowable thermal stresses per set time and also, obtaining an operable life with operation of set time to execute a display command are also described in Patent Reference 2.

Please replace the second paragraph on page 5 with the following amended paragraph:

In Patent Reference 2, ~~it is constructed so that~~ a part which has reached fatigue is displayed by life estimation due to thermal stress and a worker can easily decide the part to prevent a fault and also by estimating whether or not operation can be performed by expected life time with operation of set time, the worker can improve a use method or a load state and use frequency of the inverter apparatus and thereby take life-prolonging measures~~,~~. ~~but unless~~Unless the worker inspects a display part and checks its display or alarm and checks a life determination result or a life estimation result, the life-prolonging measures cannot be taken. ~~and there~~There was also a problem that an abnormal stop of a system is made since the inverter apparatus stops an output by a life determination without taking the life-prolonging measures in case of missing the display or alarm.

Please replace the first full paragraph bridging pages 6-7 with the following amended paragraph:

In an electric motor control apparatus for converting DC electric power into AC electric power of a variable frequency and a variable voltage and performing variable control of an electric motor acting as a load, having a switching circuit having a semiconductor device such as a power transistor and a diode connected in parallel with this power transistor~~,~~. ~~a~~A control part for generating a driving pulse based on an operating frequency signal set by an operating frequency setting part and a carrier frequency signal set by a carrier frequency setting part, and a driving circuit for amplifying the driving pulse outputted from this control part and performing on-off control of the power transistor of the switching circuit~~,~~are provided. ~~the~~The electric motor

control apparatus of this invention comprises a current computation part for computing an output current from a current flowing through the semiconductor device and also outputting a current breaking signal to the control part when an output current signal computed exceeds a current limit value signal outputted from a current limit level adjusting part, a temperature change estimation part for estimating changes in temperature of the semiconductor device to compute temperature change amplitude based on this output current signal, the operating frequency signal and the carrier frequency signal, a power cycle curve data storage part for storing power cycle curve data showing a relation between the temperature change amplitude and a power cycle life of the semiconductor device, a thermal stress computation part for converting the temperature change amplitude computed by the temperature change estimation part into the number of power cycles used as the power cycle life of the semiconductor device by the power cycle curve data and computing a thermal stress signal, and a life estimation part for doing life estimation of the semiconductor device based on this thermal stress signal and producing an output to a display part as a life estimation result signal and further calculating life time per set time and comparing the life time with an expected life and outputting an alarm to the display part as a life determination signal when the life time is shorter than the expected life, so that life estimation with high accuracy can be done.